

Appl. No. 10/075,209
Amendment A, March 21, 2003
Reply to Office action of September 25, 2002

REMARKS

Reconsideration of the above-identified application in view of the present amendment is respectfully requested. By the present amendment, claims 1-4 are cancelled, without prejudice or disclaimer, and new claims 5-9 are added.

Turning to the various objections and rejections proffered under 35 U.S.C. §112, these objections and rejections are traversed. It is believed that the Examiner has misconstrued the layers, as identified by reference numerals 2-5 in Fig. 2, as providing the blocks set forth within the claims. However, the Examiner should appreciate the language concerning direction of consideration as set forth in the claims. This can be easily understood by reference to the attached marked-up copy of Fig. 2, identified as Exhibit "A," that shows four example blocks. Specifically, within the attached copy of Fig. 2, it can be seen that four example blocks are provided because the direction of consideration is along the vertical direction, which is the identical direction along which the height of the inserts 7 are taken.

Further, it should be appreciated that the claim language itself lends to an easy understanding of the structure. Specifically, it is to be noted that the claim language states that the blocks have recesses. As shown in the attached mark-up of Fig. 2, the blocks have such recesses. In the misidentification of the blocks as being the layers 2-5, only the lowest layer 2 has recesses. As such, it is logical that the layers 2-5 should not be considered as the blocks.

It is assumed that the Examiner now has a better understanding of the subject invention via the aid of the enclosed marked-up copy of Fig. 2. If the Examiner has

Appl. No. 10/075,209
Amendment A, March 21, 2003
Reply to Office action of September 25, 2002

further queries, the Examiner is invited to contact the applicants representative. Also, if the Examiner feels that an additional drawing along the lines of the marked-up Fig. 2 would be of benefit within the subject application, the applicants would be pleased to submit a proposed drawing correction for Fig. 2 or a new drawing that shows the mark-up as provided on the attached copy of Fig. 2.

In view of the above discussion, with the aid of the attached marked-up photo copy of Fig. 2, it is respectfully requested that the various objections and rejections under 35 U.S.C. §112 be withdrawn.

Turning the rejection of claims in view of the patent to Nord et al. (U.S. Patent No. 6,315,447, hereinafter referred to as "the Nord patent"), the rejection is respectfully traversed. It is to be noted that the Nord patent, does not provide an adequate estimation of the scattered radiation through a phantom. In distinction, the present invention deals with consequences that are involved with the use of a conical radiation so that an image of the object is obtained in a short time. The same conical radiation must be utilized within the calibration process. A drawback of a conical radiation is the production of a considerable scattered radiation which arise at detectors with the primary, unreflected radiation. It is the primary, unreflected radiation that is useful to obtain measurements. The scattered radiation can be estimated with a second irradiation in which a grid of lead balls between the object and the detectors stops the primary radiation. The difference must then be subtracted from the total radiation measured in the first irradiation.

An estimation of the radiation scattered in the object is obtained by an extrapolation of the radiation scattered in the

Appl. No. 10/075,209
Amendment A, March 21, 2003
Reply to Office action of September 25, 2002

phantom when the calibration is performed. This radiation scattered in the phantom can be measured precisely through the grid of lead balls, because a second irradiation entails no health consequence for the inert phantom. However, this scattered radiation must be similar to the scattered radiation by the object of similar thickness of corresponding materials. According to the invention, as set forth in claim 1, the inserts have proportions and distributions in the blocks that are analogous to proportions and distributions of the second material of the object in the first material of the object. For example, the inserts simulate the bone material and also simulate distribution and proportions of the bones in a living body. Accordingly, new claim 5 and all the claims dependent therefrom are allowable.

Further, an important contribution to the desired effect is a sufficient distance between the inserts. Such a proposition is set forth in new claim 8. The Nord patent does not provide for such sufficient separation. In general, the Nord patent does not address the same issues addressed by the present invention. This is not of great surprise because similar proportions and distributions of the materials in a phantom and that of an object to be examined are important only when scattered radiation must be considered. This is lacking within the Nord patent. Further, scattered radiation is large with a diverging conical radiation but is otherwise small. The Nord patent is silent about the shape of the radiation and does not address the problems related scattered radiation. As such, this is taken as a clear indicator that the Nord patent does not provide any disclosure or teaching that is directed to the specifics of the subject invention.

In view of the forgoing, it is respectfully submitted that all of the presently pending claims are allowable in view of the Nord patent.

Appl. No. 10/075,209
Amendment A, March 21, 2003
Reply to Office action of September 25, 2002

Accordingly, it is respectfully submitted that the above-identified application is in condition for allowance and allowance of the above-identified application is respectfully requested.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No 34363.

Respectfully submitted,
PEARNE & GORDON LLP

By: Ronald M. Kachmarik
Ronald M. Kachmarik, Reg. No. 34512

526 Superior Avenue East
Suite 1200
Cleveland, Ohio 44114-1484
(216) 579-1700

March 21, 2003

FAX RECEIVED

MAR 21 2003

TECHNOLOGY CENTER 2800

2/2

BLOCKS

FIG. 2

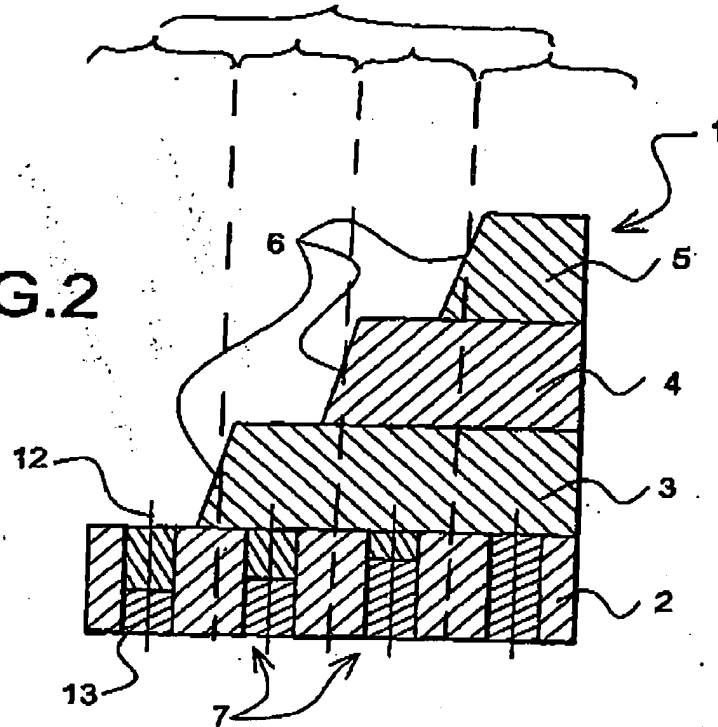
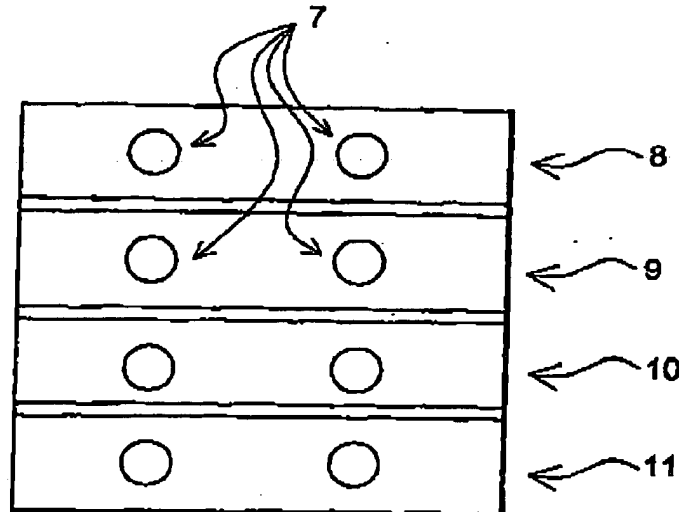


FIG. 3



B 13769.3 JCI